INEC O

> OPERATION AND MAINTENANCE MANUAL

ALITA

membrane blowers

USER MANUAL

(version 2012.01)

Thank you for purchasing the Alita membrane blower.
Read this manual carefully before using the product.

This manual applies to models AL-6A, AL-6SA*, AL-15A, AL-15SA*, AL-20, AL-30, AL-40, AL-50, AL-60, AL-80, AL-100, AL-120, AL-150, AL-200, AL-250, AL-300, AL-400, AL-500W.

RoHS COMPLIANT	Alita blowers/pumps comply with the conditions of European Union directive 2002/95/ES issued by the European Parliament and Commission dated January 27, 2003 on the Restriction of the use of certain Hazardous Substances in electrical and electronic equipment.	CE	Alita blowers/pumps comply with the European Community directive for mechanical equipment.

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1 DEFINITIONS

1.1 GENERAL

Manual

This user manual is the intellectual property of IN-ECO, spol. s.r.o. For more information about the company and its products, visit www.in-eco.eu.

Blower

Within the scope of this manual, the blower is considered the Alita membrane blower, also referred to as a linear air pump. Some models can be used as a blower and as a vacuum pump.

Gas (air)

Within the scope of this manual, gas is considered as air, pure gas, a mixture of air and gas or a mixture of gases. The same applies to the term air.

Authorized IN-ECO service

Within the scope of this manual, authorized IN-ECO service is considered the service center of IN-ECO, spol. s.r.o. For more details (contact information), visit www.in-eco.eu.

2 SAFETY

The blower shall only be operated by persons trained according to this manual and relevant safety regulations.

Handling the blower as electrical equipment in an unprofessional manner may lead to severe or even fatal injuries!

Read this manual carefully before performing any operations with the blower. The manual must be absolutely clear. Follow all instructions in this manual and keep it in a visible place near the used blower. Respect the safety regulations during installation and operation.

Connect the blower to a 220 – 240 V / 50 Hz (60 Hz) power supply.

Risk of electric shock!

Disconnect the blower from the power supply before performing maintenance or repair work to avoid electric shock!

Power cord

The power cord must not come into contact with the warm parts of the device or with other heat sources. Do not leave the power cord lying on sharp edges or corners. Do not twist or bend the power cord.

Extension cords

Only use three-wire extension cords, which have a three peg plug with a grounding peg and three hole socket, which enables the insertion of the blower plug. Make sure the extension cord is not damaged. If you use an extension cord, use a cord that adequately compliments the electric current, which the blower requires. Choosing the wrong cord can result in a voltage drop, loss of power and dangerous overheating.

Risk of injury caused by a hot surface and hot medium!

The blower can become very hot during operation. To prevent burns, do not touch the surface of the equipment during operation. The surface temperature of a blower can reach 70°C (bottom of the blower with damper, for an ambient temperature of 25°C). Allow the equipment to cool down after stopping. If necessary, use suitable protection preventing random contact with the hot equipment.
The compressed medium can be very hot.

Protect yourself against:

> direct contact with the hot equipment or pipe

Noisy or rough blower operation!

If encounter any unwanted, unusual noise or rough blower operation, disconnect the blower from the power supply and check its state (membrane), and if necessary, contact an authorized IN-ECO service center.

Noise emission

The maximum levels of acoustical noise or the sound power level respectively, measured according to the conditions of the relevant standard, are stated for each model at www.in-eco.eu.

3 USE

3.1 GENERAL

This manual applies to Alita membrane blowers. It is common for models AL-6A, AL-6SA*, AL-15A, AL-15SA*, AL-20, AL-30, AL-40, AL-50, AL-60, AL-80, AL-100, AL-120, AL-150, AL-200, AL-250, AL-300, AL-400, AL-500W. Differences in design or instructions are identified. *) Model AL-6SA and AL-15SA can be used as both a blower and vacuum pump. The manual must be available at the location in which the equipment is used.

3.2 CONDITIONS OF USE

Purpose

Alita blowers are used for producing overpressure and are a source of compressed gas (air). They are used for compressing or sucking gases, which are not explosive, flammable, aggressive or poisonous. Technical parameters are provided on the product label and also at www.in-eco.eu. Blowers meet the demands of continuous operation. For interrupted operation, the maximum number of starts per hour is: 10.

Maximum working pressures of blowers:

AL-6A, AL-6SA, AL-15A, AL-15SA, AL-20A.....100 mbar
AL-30, AL-40.....150 mbar
AL-60, AL-80.....220 mbar
AL-100, AL-120, AL-150, AL-200, AL-250, AL-300, AL-400, AL-500W.....260 mbar

The blower shall only be used up to the maximum working pressure. Exceeding this value can damage or destroy the blower. This type of damage cannot be the subject of returning the blower and warranty service. Follow the relevant working (performance) curves shown in the catalog sheets and on the www.in-eco.eu website.
Install a safety valve to protect the blower against overloading where it is possible that the maximum working pressure value can be exceeded. We recommend using a manometer for checking the operating pressure.

Placement

The blower is intended for indoor use. Place the blower horizontally in a well-ventilated area, without vibrations. If necessary, install anti-vibration equipment. Protect the blower against unfavorable weather conditions (rain, snow, direct sunlight, etc.).

Prevent any liquids from entering the blower. If the pipe to which the equipment is connected discharges into liquid, place the blower above the level of this liquid. If the blower must be placed below this level, prevent the reverse suction of liquid (for example, install a siphon on the pipe, install a backflow valve, etc.).
If the blower is used in water treatment plant, place it accordingly to prevent it from drawing in vapors from the water treatment plant, or from sucking in sludge or sludge foam.

Install the blower in areas with sufficient space to enable its regular maintenance.

The improper placement or installation can have a negative effect on the service life of the blower.

WARNING: All warranty rights are forfeited if the blower is used contrary to the stated conditions.

Ventilation, cooling

Ventilation and cooling is essential for the proper operation of blowers. Place the blower in a well-ventilated area, with sufficient air circulation. Good ventilation guarantees a lower working temperature, prevents overheating and damage caused to the blower. If the blower is used in an enclosed area, provide at least two air vents, each at least 1 dm^2 wide. Two vents are necessary for reliable air circulation and cooling. If you use the blower in a confined area, ensure the necessary air circulation (e.g. using a ventilator), to prevent the blower from overheating and shortening its service life.

Restrictions

Do not use the blower if the air contains steam (humidity greater than 80%), a large content of dust, charged particles, cellulose, if it contains acids, alkaline corrosive substances or aggressive substances. Do not use blowers in areas where explosive gases may emerge.

Do not use the blower (pump) for compressing or pumping gases which are explosive, flammable, aggressive or poisonous.

Do not use blowers for taking in water or other liquids. Prevent any liquids from entering the blower.

Air (gas) temperature and humidity

The blower is specified to be used within an ambient temperature range *(maximum)* 5°C to 40°C. The optimal working ambient temperature is 10°C to 25°C. Using the blower out of this range can lead to a failure and significantly shorten service life.

The maximum temperature of gas drawn in must not exceed 40°C.
The maximum humidity of gas drawn in must not exceed 80%.

Altitude

According to the laws of physics, tf the equipment is used at an altitude exceeding 1,000 meters above sea level, the blower/pump performance will be lower. In this case, consult an authorized IN-ECO service center.

CAUTION

Use Alita blowers only under the conditions limited by its parameters stated within this manual and on the www.in-eco.eu website. This particularly concerns the ambient temperature and the sucked gas, maximum pressure difference and level of electrical coverage.

Protect the original product label of the equipment. All warranty rights are voided by damaging or removing this label.

Damages caused by failure to respect these conditions cannot be the subject of returning the blower and warranty service.

4 INSTALLATION

4.1 INSTALLATION

The blower is designed for a 220 – 240 V / 50 Hz (60 Hz) power supply. The electrical coverage level is stated on the product label (IP 54)/

Install the blower in a horizontal position, on a solid foundation or solid base. Install the blower in areas without vibration.

The power cord must not come into contact or close to warm parts of the device or with other heat sources. Do not leave the power cord lying on sharp edges or corners. Do not twist or bend the power cord.

Connect the blower to a pipe with an inner diameter at least 1.5 times greater than the inner diameter of the output branch of the blower. Pressure (pressure loss) proportionately increases for pipes that are excessively narrow or long. This increases the demands on the blower.

5 OPERATION

5.1 START-UP

Check the following prior to the equipment start-up:

- tightness of all connected pipes, or hoses,
- opened close valves on the discharge pipes,

5.2 OPERATION

Alita blowers are designated for continuous operation. Observe the operating conditions stated in this manual, section 2 Safety, with emphasis on ambient temperature and gas drawn in. Use the blower within the specified pressure range, see section 3.2 Conditions of use.
For interrupted operation, do not exceed the maximum number of starts per hour, which the manufacturer has determined to be 10.

Prevent any liquids or solid objects from entering the blower.

Follow the performance curve in the catalog sheet on the www.in-eco.eu website to ensure proper blower operation within its pressure range. The maximum pressure difference in the system possible must not be greater than the maximum pressure difference of the blower stated in the catalog sheet on the www.in-eco.eu website or on the product label. Otherwise, the blower can be damaged.

6 INSPECTION AND MAINTENANCE

6.1 INSPECTION

Check the blower and associated pipes, air (gas) distribution system on a regular basis. First check the temperature of the equipment and air drawn in as well as the impurity of the air filter (filtration insert). Check the setting of dust and remove dust which could limit ventilation or cooling.

If you encounter any unusual noise or rough blower operation, disconnect the blower from the power supply and check its state. Repairs shall be given to authorized IN-ECO service center.

6.2 MAINTENANCE

Disconnect the equipment from the power supply to avoid electric shock. Do not perform maintenance work if the equipment is heated up to operating temperature. For maintenance reasons, carefully go over the assembly scheme of the blower 7.1 Blower assembly diagram.

Check and replace the following regularly:

- air filter (filtration insert),
- membranes (service kit).

Replacing the air filter

Clean the air filter (filtration insert) at least every 2 months and replace it, including sealing, every 6 months. Contact your blower supplier or authorized IN-ECO service center for a supply of spare parts.

Removing the air filter:

1. unscrew the screw on the filter cover and remove the cover,
2. take the filter out and check for impurity and sealing integrity,
3. remove, or "wash" filter.
   Washing the filter: gently wash the filter in warm soapy water and rinse thoroughly. Leave to completely dry before installing!

When replacing the filter, also replace the air filter seals. Remove old seals from the off-set pegs and carefully install the new seals.

Assembling the air filter: insert the new or washed filter into the frame on the top cover of the blower. Screw the filter cover on. Blower models with curvy shaped covers have an unambiguous orientation specified by the groove in the metal cast of the top cover and spring in the (plastic) filter cover.

Replacing the membrane

Membranes are parts of blowers, which are subject to wear and tear and the warranty does not cover this wear and tear. The regular replacement of membranes (2pcs), or the entire service kit (2 membranes and 2 membrane covers), is standard blower maintenance procedure. Replace these on a regular basis after each 24 months of operation. The replacement of membranes shall be given to authorized IN-ECO service center. All warranty rights are voided by not respecting the interval for replacing the membrane. This type of damage cannot be the subject of returning the blower and warranty service.

6.3 STORAGE

Keep the blowers in a dry environment with normal air humidity. For a relative humidity of 80% or higher, store in a closed package with a drying agent.

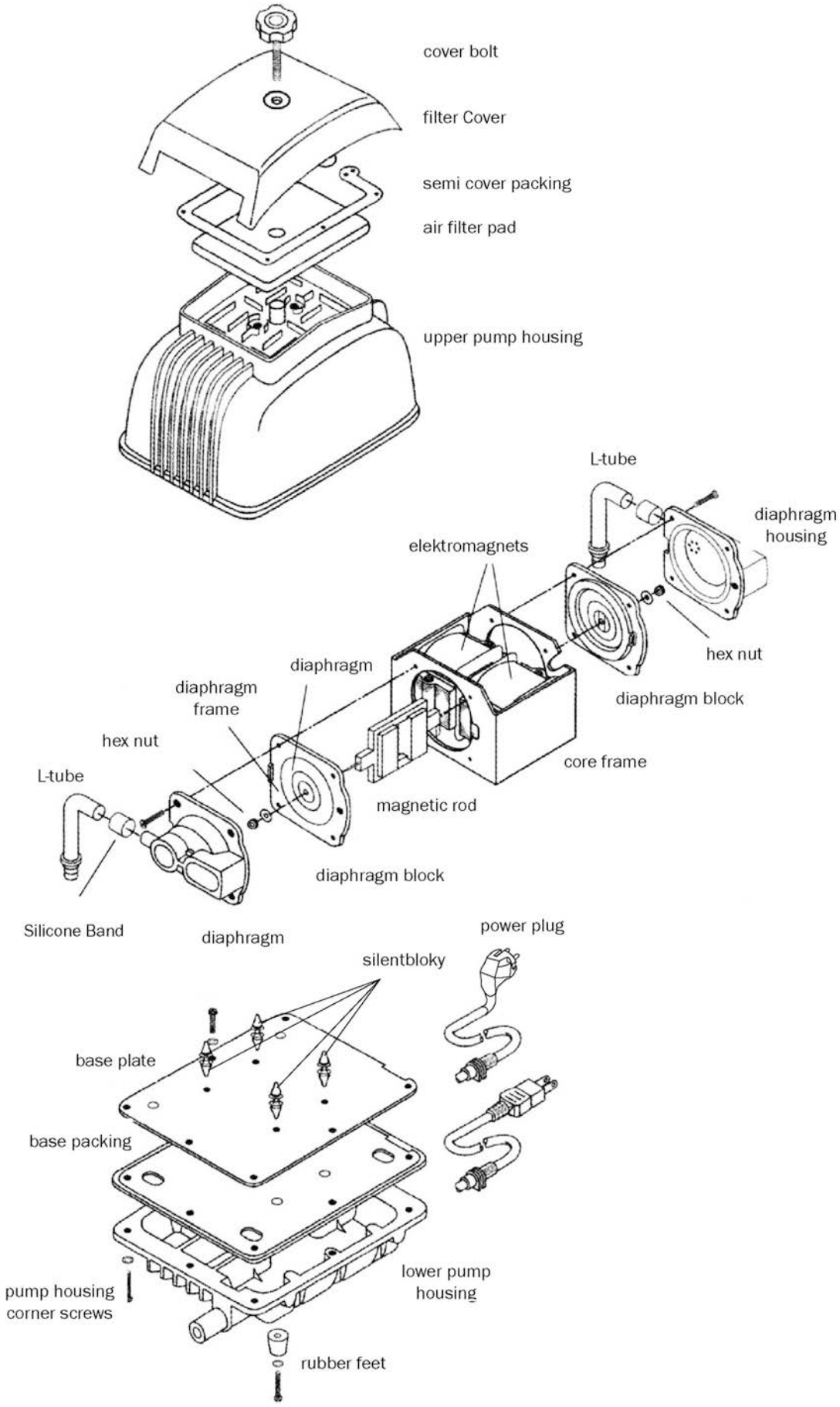
7 SERVICE

Repairs shall only be carried out by an authorized IN-ECO service center during the warranty period. All warranty rights are forfeited if the equipment is tampered with during the warranty period. This excludes the prescribed maintenance.

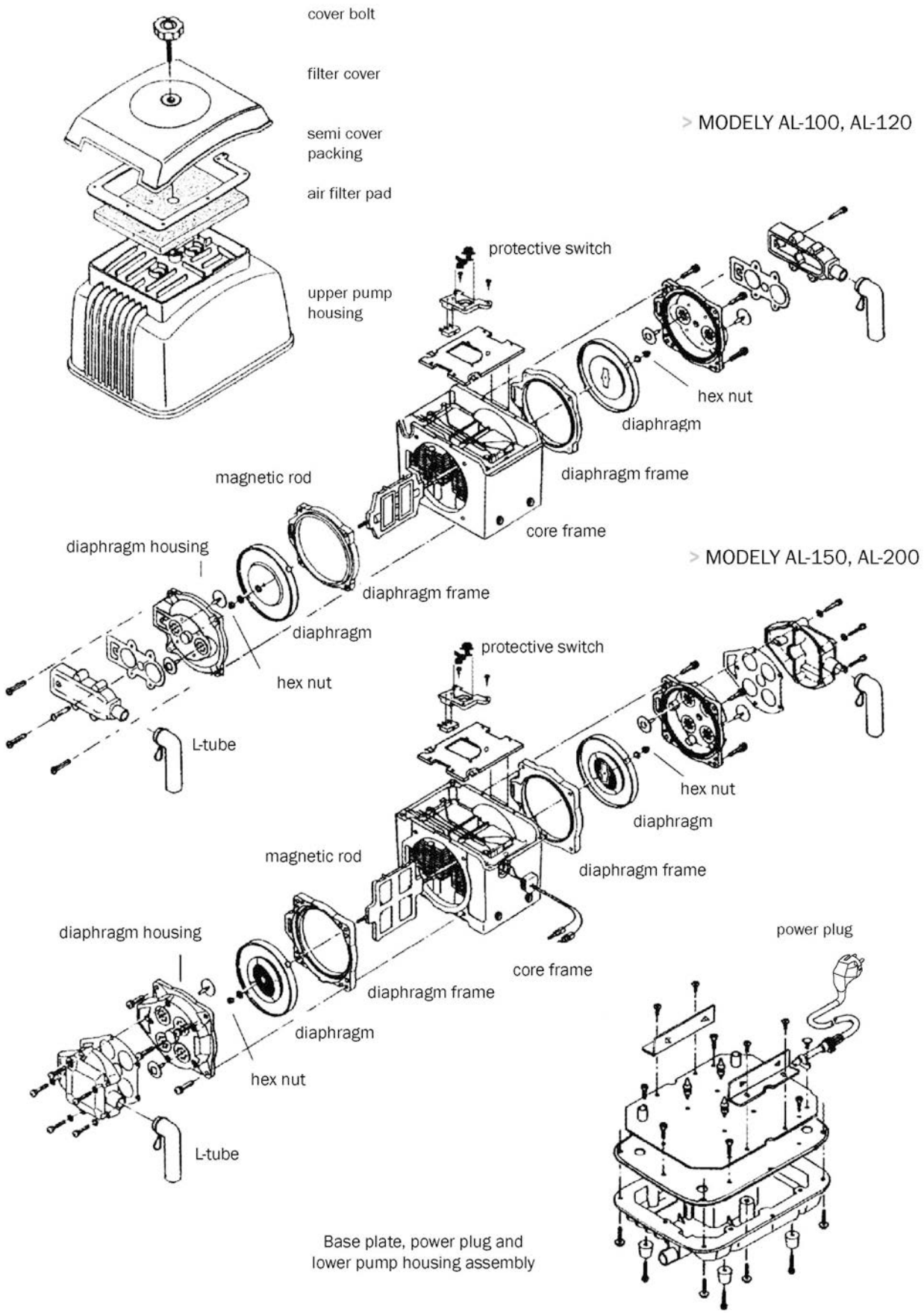
Have an authorized IN-ECO service center service blowers after the warranty has expired.

7.1 BLOWER ASSEMBLY DIAGRAM

Models: Alita AL-40, AL-60, AL-80



Models: Alita AL-100, AL-120, AL-150, AL-200



8 SPARE PARTS AND ACCESSORIES

Contact the authorized IN-ECO service center for the specifications and supplies of spare parts.

8.1 AIR FILTER

To protect blowers against solid objects, dust, cellulose, etc., inspect, clean and replace the air filter on a regular basis. Do not start the equipment without an air filter.

Clean the air filter (filtration insert) at least every 2 months and replace it, including sealing, every 6 months. Contact your blower supplier or authorized IN-ECO service center for the supply of spare parts.

8.2 MANOMETER

Install a manometer for the purpose of fundamental air system pressure diagnostics.

9 WASTE DISPOSAL

Valid legal waste management regulations must be observed for proper waste disposal.

10 WARRANTY

Providing the warranty conditions are respected, IN-ECO provides a 2 year warranty on Alita blowers.

Warranty conditions

- The equipment must be used in accordance with this manual.
- Repairs shall only be carried out by an authorized IN-ECO service center during the warranty period.
- All warranty rights are forfeited if the equipment is tampered with during the warranty period. This excludes the prescribed maintenance.

The following must be included when returning the blower:

1. sales receipt (warranty),
2. description of how the blower is used and the issue,
3. contact information: address, phone number, e-mail etc.

Blower returned or submitted for repair must be delivered clean.

Costs on transporting the blower to the authorized IN-ECO service center and back to the customer is covered by the customer.

The warranty expires:

- if the conditions of installation and blower operation are not observed,
- if the required maintenance is not respected,
- if the warranty conditions are not respected,

THANK YOU

Thank you for purchasing the Alita blower. We hope you will be satisfied. Do not hesitate to contact us if you have any questions.

RECORDS OF AIR FILTER INSPECTIONS AND REPLACEMENTS

Blower start-up date:	

Next filter inspection (2 months after last date)	Executed	
Date	Cleaning	Replacement